

CLAIMS

I claim the following invention:

1. ~~A control device that translates a user's non-tactile movement into a control action~~

comprising:

one or more conductor arrays connected to one or more surfaces, wherein said conductor array comprises two or more conductors;

wherein at least one of said conductor arrays comprises a first conductor that senses the user's non-tactile movement within a first plane along a first axis of said surface;

wherein at least one of said conductor arrays comprises a second conductor that senses the user's non-tactile movement within a second plane along a second axis, perpendicular to said first axis;

a converter that translates the sensed movement into three-dimensional vector data; and

a controller that correlates said three-dimensional vector data into control movement.

2. The apparatus of Claim 1 wherein said converter comprises circuitry to determine the change in voltage in the dielectric area of said first and second conductors.

3. The apparatus of Claim 1 wherein said converter comprises circuitry to measure the change in the frequency of said first and second conductors.

4. The apparatus of Claim 3 wherein said converter further comprises circuitry to heterodyne said frequency with a fixed oscillator.

5. A method of making an apparatus that translates a user's non-tactile movement into a control action comprising:

providing one or more surfaces;

providing one or more conductor arrays, wherein said conductor array comprises two or more conductors;

connecting one or more said conductor arrays to one or more said surfaces;

wherein at least one of said conductor arrays comprises a first conductor that senses the user's non-tactile movement within a first plane along a first axis of said surface;

wherein at least one of said conductor arrays comprises a second conductor that senses the user's non-tactile movement within a second plane along a second axis, perpendicular to said first axis;

providing a converter that translates said sensed movement into three-dimensional vector data;

coupling said converter to said conductors;

providing a controller that correlates said three-dimensional vector data into control movement; and

coupling said controller to said converter.

1 7. The method of Claim 5 wherein said step of providing a converter further comprises
2 ~~providing circuitry to measure the change in the frequency of said conductors.~~

1 8. The method of Claim 7 wherein said step of providing a converter further comprises
2 providing circuitry that heterodynes said frequency with a fixed oscillator.

1 9. A method that translates a user's non-tactile movement into a control action comprising:
2 sensing with a first conductor the user's non-tactile movement within a first plane along a
3 first axis of a surface;
4 sensing with a second conductor the user's non-tactile movement within a second plane along
5 a second axis, perpendicular to said first axis;
6 translating said sensed movement into three-dimensional vector data; and
7 correlating said three-dimensional vector data into control movement.

1 10. The method of Claim 9 wherein said step of translating further comprises determining the
2 change in voltage in the dielectric area of said conductors.

1 11. ~~The method of Claim 9 wherein said step of translating further comprises measuring the~~
2 ~~change in the frequency of said conductors.~~

1 12. The method of Claim 11 wherein said step of translating further comprises heterodyning said
2 frequency with a fixed oscillator.

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1 13. ~~A program storage device readable by a machine, tangibly embodying a program of~~
2 ~~instructions executable by the machine to perform method steps that translate a user's non-tactile~~
3 ~~movement into a control action, said method steps comprising the following steps:~~

4 sensing with a first conductor the user's non-tactile movement within a first plane along
5 a first axis of a surface;

6 sensing with a second conductor the user's non-tactile movement within a second plane
7 along a second axis, perpendicular to said first axis;

8 translating said sensed movement into three-dimensional vector data; and

9 correlating said three-dimensional vector data into control movement.

1 14. The program storage device of Claim 13 wherein said step of translating further comprises
2 determining the change in voltage in the dielectric area of said conductors.

1 15. The program storage device of Claim 13 wherein said step of translating further comprises
2 ~~measuring the change in the frequency of said conductors.~~

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- 1 16. The program storage device of Claim 15 wherein said step of translating further comprises
2 heterodyning said frequency with a fixed oscillator.

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